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United States Patent and Trademark Office

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August 5, 2003

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Int'l Bureau

AUG 18 2003

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VIA HAND DELIVERY

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AUG - 5 2003

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Thomas Sullivan  
Assistant Bureau Chief for Management  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Re: **Request for Reconsideration**  
**Technical Questions Regarding the IBFS**

Dear Mr. Sullivan.

We hereby request that your office reconsider its decision not to provide any information in response to the technical questions submitted by the undersigned on July 21, 2003 and again on July 24, 2003 (A copy of the questions and associated emails are attached.) Through these questions, we sought clarification on issues relevant to the timely filing of satellite applications on the International Bureau Application Filing and Reporting System ("IBFS") and to the fairness of Commission's new satellite licensing rules.

In response to the questions, your office provided a blanket statement that "[t]he FCC's Computer Security Officer has evaluated [our] request and has determined that the FCC cannot share the information requested. The information being requested contains highly sensitive internal use technical and management information which could potentially be used to launch a cyber-attack on the FCC."

Most, if not all, of the questions raise no apparent security issue but are critical to an applicant's ability to make timely filings and to have some reasonable assurance that it has fair access to the application process. Under the new rules, satellite applications will not be accepted until the opening of a filing window at 12 AM on an, as of yet, undisclosed date. Applicants that file early, by even a millisecond, will have their applications rejected and will forfeit their filing fee, which for a single satellite system can be nearly \$100,000. Applicants that delay filing, whether intentionally or unintentionally, risk losing the license to an earlier-filed applicant. In this context, issues

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of synchronization and which button triggers the time stamp, are critical. In the July 8, 2003 FAQ, the International Bureau implicitly recognized the importance of an applicant's ability to measure precisely when the filing window opens and provided information regarding the synchronization of the Commission's computer system with the U.S. Naval Observatory. For the level of precision the Commission has chosen for processing applications, however, the information we have requested is important and would appear to be disclosable without compromising security.

Other questions are fundamental in assuring potential applicants that the Commission's new system is fair and can be answered without any apparent impact on the security of the Commission's system. For instance, is it possible that any potential electronic filers have a direct connection to the IBFS database server (that might give them a faster or more reliable connection)? Has the Commission tested the IBFS system to ensure that applicants will not be subject to packet loss and/or time outs as a result of high utilization of Commission servers at the time of filing? Given the Commission's implementation of a drastically new system and the stakes at issue, we believe that it is reasonable that the Commission provide some assurance that no potential applicant has an undisclosed filing advantage and that the Commission has properly tested the system.

For these reasons, we request that your office reconsider its decision not to provide any information in response to the questions submitted previously by the undersigned

Respectfully submitted,



Bruce D. Jacobs

Tony Lin

## Attachments

cc     Jennifer Gilsenan  
         Jacqueline Ponti  
         Roderick Porter  
         Mary Jane Solomon

**Tony Lin**

07/21/2003 04:20 PM

To: maryjane.soloman@fcc.gov, jacqueline.ponti@fcc.gov  
cc: Bruce.Jacobs/SPPT/US@SPPT  
Subject: Technical questions re IBFS

Jack,

As I mentioned on the phone, attached to this email is a list of primarily technical questions regarding the IBFS.

The first set of questions are relevant to ensuring that the computer systems of potential applicants and that of the Commission are in "agreement" as to when the filing window is open. The second set of questions concern how the IBFS processes applications and how the system generates time-stamps. The questions also relate to concerns about server-side congestion that could result in packet loss and possibly, as a result, applicants timing out and losing their place in the queue.

Given that the publication of the new rules could appear in the Federal Register on any day, we would appreciate your prompt reply.

Thanks



Technical questions re IBFS.doc

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\*\*\*\*\*

Tony Lin

07/24/2003 12 14 PM

To MaryJane.solomon@fcc.gov  
cc j.ponti@fcc.gov  
Subject Technical questions re IBFS

Mary Jane,

After your message, I realized I misspelled your name. Oddly it didn't "bounce" at the FCC. Hopefully, Jacki received the email, but now I'm a little concerned neither of you ever got it.

In any event, attached is the list of questions.

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----- Forwarded by Tony Lin/SPPT/US on 07/24/2003 12 11 PM -----

Tony Lin

07/21/2003 04 20 PM

To maryjane.soloman@fcc.gov, jacqueline.ponti@fcc.gov  
cc Bruce.Jacobs/SPPT/US@SPPT  
Subject Technical questions re IBFS

Jacki,

As I mentioned on the phone, attached to this email is a list of primarily technical questions regarding the IBFS.

The first set of questions are relevant to ensuring that the computer systems of potential applicants and that of the Commission are in "agreement" as to when the filing window is open. The second set of questions concern how the IBFS processes applications and how the system generates time-stamps. The questions also relate to concerns about server-side congestion that could result in packet loss and possibly, as a result, applicants timing out and losing their place in the queue.

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## Issue 1: Synchronization

According to the July 8, 2003 FAQ, the Commission's central server synchronizes with a U.S. Naval Observatory ("USNO") server every three hours. It is our understanding that during a three-hour period the Commission's central server clock could deviate from USNO time up to several milliseconds. The following questions explore the extent of such deviation and the possibility that applicants may synchronize to USNO time differently than does the Commission. In addition, since any deviation between USNO time and the Commission's computers would be reduced at the critical time by synchronizing shortly before the filing window opens, would the Commission commit to a schedule which includes synchronizing a few minutes before midnight?

1. Which specific USNO server(s) does the FCC use to synchronize its servers?
2. What program does the Commission use to synchronize time between the USNO server and the Commission's central server? Between the central server and the all servers involved in the IBFS application process?
3. At what time precisely (every three hours) does the Commission synchronize the central server with the USNO server? At what time (every hour) does the Commission synchronize the central server and the IBFS server?
4. What are the offset, frequency, jitter, stability and precision for all servers involved in the IBFS application process?

## Issue 2: Processing

1. What servers (e.g., svartifoss2.fcc.gov, gullfoss2.fcc.gov, and IBFS database) are involved in the IBFS application process? Please provide a flow diagram of the application process indicating the actions taken on each server.
2. On which server is the time-stamp generated?
3. At what point does the client side script call the subroutine that generates the time-stamp? Is the time-stamp generated when the applicant pushes the "File a Form" button or the "OK" button on the subsequent confirmation page?
4. Will an applicant "time out" if he/she does not press the "OK" button within a certain period after pressing the "File a Form" button? If so, what is that time period?
5. Please provide the server side script that handles the submission process.
6. What is the maximum concurrent connections allowed by the IBFS web servers (svartifoss2.fcc.gov and gullfoss2.fcc.gov)? What is the dedicated bandwidth capacity for the IBFS web servers? If there is no dedicated bandwidth, what is the total bandwidth for the Commission's network?
7. Has the Commission tested the IBFS system to ensure that applicants will not be subject to packet loss and/or time outs as a result of high utilization of Commission servers at the time of filing? If so, please provide any reports or documents regarding such testing, including the assumptions or parameters the Commission made in conducting such testing (e.g., expected number of applications).
8. Are there any software or hardware devices before the web servers that could contribute to packet loss and/or timeouts?

- 9 If an applicant does time out while trying to make a filing, will there be any record of the applicant having attempted to make the filing? Will there be any way to re-establish the applicant's place in line?
- 10 Is it possible that any potential electronic filers have a direct connection to the IBFS database server? Other FCC servers? If so, which servers? If not, what is the basis for the answer?